

ABSTRACT OF THE DISCLOSURE

A plurality of flash lamps are covered with a reflector. Optical fiber members are attached to the reflector on portions located immediately above the flash lamps. When the flash lamps emit flash light toward a semiconductor wafer, the optical fiber

5 members partially guide the emitted light so that a CCD measures the intensity of light emitted from each of the plurality of flash lamps. A computer detects the emission state of each of the plurality of flash lamps on the basis of a result of measurement. At this time, the computer compares standard luminous intensity obtained when the irradiation state on the semiconductor wafer satisfies a prescribed criterion with the luminous

10 intensity in actual processing for detecting the emission states of the plurality of flash lamps. Thus provided is a thermal processing apparatus capable of reliably and simply detecting deterioration of lamps.